

2. Determination of trip attraction factors using multiple linear regression procedures based primarily on employment. Again, this was based primarily on past studies.
3. Distribution of resulting trips using a four-purpose gravity model with expanded trip length frequency curves previously developed that reflect an enlarged study area. The trip purposes for Rockingham\Hamlet are home-based work, other home-based, non-home-based, internal-external, taxi, truck, and commercial vehicles.
4. Traffic assignments and accuracy checks so the network model corresponds to existing ground counts.

1994 INTERNAL TRIP PRODUCTIONS:

Internal trip productions were estimated on a zonal basis in three categories: (1) trips produced by dwelling units, (2) trips produced by commercially owned passenger cars, and (3) trips produced by commercial trucks and taxis. Dwelling unit trip generation rates were adjusted from previous studies to account for the expanded planning area and changes in travel habits over time.

The trips produced were summed to produce total internally generated trips (87% Internal of total trips). That is, 87% of the total internal generated trips remained in the planning area. The remaining 13% were trips that had internal origins and travelled outside the planning area. These internal-external trips were distributed to the zones as external trips. They were removed from the internal trips and the remaining trips were used to synthesize internal travel.

The adjusted internal trips were separated into three purposes--home based work (HBW), 23%; non-home based (NHB), 30%; and other home based (OHB), 47%.

The Rockingham\Hamlet area is important to the economy of Richmond County, and therefore, draws a large number of trips from outside the planning area. The number of secondary internal (NHB) trips attributable to external-internal traffic was calculated to be 13,817 in the base year. That is, vehicles garaged outside the planning area making external-internal trips were assumed to be making 13,817 trips per day while within the study area (e.g. to go to lunch, stop by the store, etc.). Distribution of these trips within the study area was made by merging them with the internally produced NHB trips and distributing them according to each zone's relative attractiveness.

The calculation of Secondary Non Home-Based trips for the base year 1994 and the design year 2020 are as follows: